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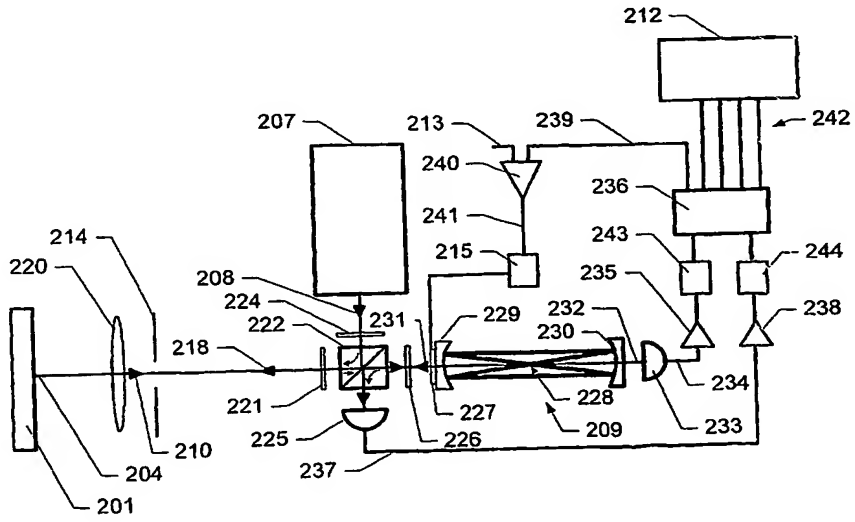
(54) Title: NOISE REDUCTION OF LASER ULTRASOUND DETECTION SYSTEM



(57) Abstract: A method of detecting a property of an object comprising directing a detection laser beam to the object to produce a scattered laser beam modulated corresponding to a motion of said object; receiving the scattered laser beam with an optical interferometer to produce an interferometrc transmission signal and an interFerometric reflection signal; combining the transmission signal and the reflection signal to generate an output signal corresponding to the motion of the object. In one embodiment the method comprises scaling at least one of the reflection signal and the transmission signal relative to the corresponding other signal by a predetermined relative scale factor; and combining the scaled reflection and transmission signals with one another to obtain the output signal. In another embodiment, the combining comprises generating the output signal as a ratio of a signal derived from the transmission signal and a signal derived from the reflection signal.

WO 2005/095885 A1